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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,392	03/05/2002	Ioannis Katsavounidis	INTV.012A	8446
7590 08/28/2006			EXAMINER	
Rosenberg Klein & Lee 3458 Ellicott Center Drive-Suite 101 Ellicott City, MD 21043			WONG, ALLEN C	
			ART UNIT	PAPER NUMBER
			2621	
DATE MAILED: 08/28/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,392

Applicant(s)

KATSAVOUNIDIS ET AL.

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11,13-22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11,13-22 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 5/26/06 have been fully read and considered but they are not persuasive.

After the interview and this amendment, careful thought and consideration is given, and the language of the claims is processed in the following manner as described below.

Regarding lines 1-3 on page 15 of applicant's remarks, applicant asserts that the combination of the references used do not disclose the present invention. The examiner respectfully disagrees. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re*

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Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding lines 8-9 on page 16 and lines 2-5 on page 18 of applicant's remarks, applicant states that Glaise does not overcome the deficiencies of Rhee, and applicant states that Glaise does not disclose "concatenating said selected first data portions... into a concatenated bit field". The examiner respectfully disagrees. Rhee does teach the use of packetizing data, but Rhee does not specifically state the "concatenating said selected first data portions... into a concatenated bit field". However, Glaise teaches in column 7, lines 1-6, that linkage or concatenation of data is used and implemented into a concatenated bit field. Thus, Glaise discloses concatenating the selected first data portions of the packet data from the plurality of frame packets into a concatenated bit field. The linkage or concatenation of data is not a new feature. Reorganization of data is not a patentable feature. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee and Glaise as a whole for robustly reducing costs during the high-speed transmission of data packets in applications where time is limited while maintaining accuracy of the transmitted data, as disclosed in Glaise's column 2, lines 60-62.

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The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding lines 9-12 on page 17 and lines 5-7 on page 18 of applicant's remarks, applicant states that Glaise does not show "selecting only said first data portions... exclusive of said second data portions". It is not Glaise alone teaching the aforementioned limitation. However, the combination of Rhee and Glaise as a whole is considered to meet the limitations of the claims. In column 6, lines 10-23, Rhee's figure 4 teaches the adapter that provides data to the transmitter 408 for selected packet data portions based on computations. Also, in figure 6, Rhee discloses there are FEC packets transmitted along with packetized data that represents frame X. Rhee discloses selecting portions of packet data from each of the plurality of frame packets, the selected portions being less than an entirety of a corresponding frame packet. Glaise teaches in column 7, lines 1-6, that linkage or concatenation of data is used and implemented into a concatenated bit field. Thus, Glaise discloses concatenating the selected first data portions of the packet data from the plurality of frame packets into a

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concatenated bit field. The linkage or concatenation of data is not a new feature.

Reorganization of data is not a patentable feature.

The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee and Glaise as a whole for robustly reducing costs during the high-speed transmission of data packets in applications where time is limited while maintaining accuracy of the transmitted data, as disclosed in Glaise's column 2, lines 60-62.

Regarding lines 10-12 on page 18 of applicant's remarks, applicant states that Lewis, Tan and Watanabe do not overcome the details of various dependent claims. The examiner respectfully disagrees. These "various details" from dependent claims are met by the combination of Rhee and Glaise in view of one of these references Lewis, Tan and Watanabe for at least the reasons as stated above and in the rejection below. All of the previously mentioned limitations have already been addressed in the above paragraphs and in the rejection below.

Regarding lines 12-14 on page 18 and lines 1-3 on page 19 of applicant's remarks, applicant argues that the combination of references does not teach "selecting only said first data portions... exclusive of said second data portions". The examiner

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respectfully disagrees. This limitation has already been discussed in the above paragraphs and in the rejection below. Peruse the above paragraphs and in the rejection below.

Regarding lines 14-16 on page 18 and lines 3-4 on page 19 of applicant's remarks, applicant asserts that the combination of references does not teach "concatenating said selected first data portions... into a concatenating bit field". The examiner respectfully disagrees. This limitation has already been discussed in the above paragraphs and in the rejection below. Peruse the above paragraphs and in the rejection below.

Regarding lines 16-17 on page 18 and lines 5-6 on page 19 of applicant's remarks, applicant states that the combination of references does not teach "generating a forward error correction code for the concatenated bit field of said first data portions". The examiner respectfully disagrees. In column 6, lines 10-19, Rhee discloses the forward error correction (FEC) bits are generated. Rhee discloses generating a forward error correction code for the selected portions of packet data. Rhee does not disclose concatenating said selected first data portions of said packet data from the plurality of frame packets into a concatenated bit field. However, in column 7, lines 1-6, Glaise teaches concatenating the selected first data portions of the packet data from the plurality of frame packets into a concatenated bit field. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee and Glaise as a whole for robustly reducing costs during the high-speed transmission of data

packets in applications where time is limited while maintaining accuracy of the transmitted data, as disclosed in Glaise's column 2, lines 60-62.

Thus, the rejection is maintained.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 5-7, 11, 15, 16, 18-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (6,289,054) in view of Glaise (6,097,725).

Regarding claims 1, and 3, Rhee discloses a method of providing forward error correction (FEC) to a frame, the method comprising the steps of:

packetizing the data frame into frame packets, each frame packet having packet data defined by at least a first data portion and a second data portion (col.6, ln.10-23, note in fig.4, note adapter 414 computes the packets for preparation of packetization and transmission of packet data at element 408; also peruse fig.6, note each data frame is packetized into many K source data frame packets as seen in "PERIODIC FRAME X", where each of these K source frame packets are representative of the first data portion and second data portion, third, fourth and fifth data portion);

selecting portions of packet data from each of the plurality of frame packets, said selected portions being less than an entirety of a corresponding frame packet (col.6,

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In.10-23, note in fig.4, the adapter provides data to the transmitter 408 for selected packet data portions; also note in fig.6, that there are FEC packets transmitted along with packetized data that represents frame X);

generating a forward error correction code for the selected portions of packet data (col.6, In.10-19; FEC bits are generated);

packetizing said forward error correction code to form a forward error correction code packet (col.6, In.10-19; note the computation of forward error correction packets is made and encoding and packetizing forward error correction codes to form FEC packets); and

transmitting the forward error correction code and the packet separately from the plurality of frame packets, the packet containing the forward error correction code being identified with a user data identifier code (fig.4, element 408).

Rhee does not specifically disclose concatenating said selected first data portions of said packet data from the plurality of frame packets into a concatenated bit field. However, Glaise teaches concatenating the selected first data portions of the packet data from the plurality of frame packets into a concatenated bit field (col.6, In.36 to col.7, In.6; Glaise discloses that data can be concatenated). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee and Glaise as a whole for robustly reducing costs during the high-speed transmission of data packets in applications where time is limited while maintaining accuracy of the transmitted data (col.2, In.60-62).

Regarding claims 2 and 16, Rhee discloses wherein the transmission of the forward error correction bits in the separate packet is MPEG-4 compliant (col.5, ln.19).

Regarding claims 5 and 18, Rhee discloses wherein the forward error correction bits are generated using a systematic code (col.6, ln.19-23).

Regarding claims 6 and 19, Rhee discloses wherein the selected portions of packet data includes motion vector data and DCT data (col.5, ln.18-20; MPEG encoding/decoding must utilize motion vector data and DCT data).

Regarding claims 7 and 20, Rhee discloses wherein the selected portions of packet data includes only header data, motion vector data and DCT data (col.5, ln.18-20; MPEG encoding/decoding must utilize header data, motion vector data and DCT data).

Regarding claims 11, 15 and 22, Rhee discloses an error correction generation circuit, comprising:

a processor coupled to a processor readable memory (col.5, ln.2-10; note computer or workstation to execute instructions embodied in a computer readable medium);

a first instruction sequence stored in the processor memory and operable to cause the processor to select portions of packet data from each of a plurality of frame packets of a corresponding packetized data frame, each said frame packet having the first data portion and the second data portion (col.6, ln.10-23, note in fig.4, the adapter provides data to the transmitter 408 for selected packet data portions; also peruse fig.6, note each data frame is packetized into many K source data frame packets as

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seen in "PERIODIC FRAME X", where each of these K source frame packets are representative of the first data portion and second data portion, third, fourth and fifth data portion);

a second instruction sequence stored in the processor readable memory and operable to cause the processor to generate forward error correction data for the selected portions of packet data (col.6, ln.10-19; FEC bits are generated);

a third instruction sequence stored in the processor readable memory and operable to cause the processor to form a forward error correction packet and store the forward error correction data therein (fig.4, element 408 stores the FEC information); and

a fourth instruction sequence stored in the processor readable memory and operable to cause the processor to form a forward error correction packet and identify the separate packet with a data identifier code (col.6, ln.10-23; note element 414 can identify the first packet and determine the FEC correction if necessary).

Rhee does not specifically disclose the concatenating the selected portions of the first data portions of packet data into a concatenated bit field. However, Glaise teaches the concatenating the selected portions of the first data portions of packet data into a concatenated bit field (col.6, ln.36 to col.7, ln.6; Glaise discloses that data can be gathered or concatenated). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee and Glaise as a whole for robustly reducing costs during the high-speed transmission of data packets in applications where time is limited while maintaining accuracy of the transmitted data (col.2, ln.60-62).

1. Claims 4, 10, 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (6,289,054) and Glaise (6,097,725) in view of Lewis (6,601,209).

Regarding claims 4, 10, 17 and 24, Rhee does not specifically disclose wherein the forward error correction bits are generated using a BCH code. However, Lewis teaches the use of BCH code for error correction of data during transmission (col.3, ln.54-63). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee, Glaise and Lewis, as a whole, for accurately, efficiently, reliably transmit compressed MPEG data while maintaining high quality of the transmitted video data (Lewis col.2, ln.38-41).

2. Claims 8, 9, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (6,289,054) and Glaise (6,097,725) in view of Tan (6,075,576).

Regarding claims 8-9, 13 and 21, Rhee does not specifically disclose further comprising: setting a flag indicating that a fixed Video Object Plane (VOP) increment is to be used; and providing a corresponding fixed time increment value. However, Tan teaches the use of VOP time increment data (see figs.3A, 3B and col.4, ln.44-67; note VOPs are disclosed and that clearly, VOPs are incremented accordingly in a similar sequential manner as I, P and B frames, where corresponding fixed offset exists to provide a fixed time increment value). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee, Glaise and Tan, as a whole, for accurately, efficiently coding and decoding video image data and coefficients, while

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maintaining high image quality when synchronizing VOPs of different rates (Tan col.2, ln.1-16).

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (6,289,054) and Glaise (6,097,725) in view of Watanabe (6,084,888).

Regarding claim 14, Rhee discloses the use of MPEG-4 (col.5, ln.18-20). It is well known in the art that a packet must have a header extension code. However, if one is not convinced, Watanabe teaches the use of a Header Extension Code (HEC) in every packet in a first sequence of packets (fig.2, note header extension codes are used). Therefore, it would have been obvious to one of ordinary skill in the art to apply the teachings of Rhee, Glaise and Watanabe, as a whole, for improving the transmission efficiency of packetized data of coded data while accurately encoding the video data by reducing header data errors (Watanabe col.8, ln.57-63).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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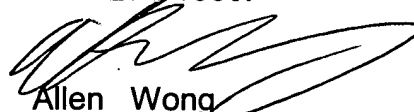
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Groody can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Allen Wong
Primary Examiner
Art Unit 2621

9/21/06
JW